SECRETARY'S ENVIRONMENTAL ASSESSMENT REPORT
FOR A COASTAL ZONE ACT PERMIT APPLICATION

Re: Croda, Inc.

January 2015

Introduction

As required by the "Regulations Governing Delaware's Coastal Zone" (Section 8.3.4) dated May 11, 1999, and amended October 1, 2001, the Secretary is required to make an environmental assessment of the impact(s) of the project on the Coastal Zone of Delaware. This is done by evaluating the project's likely impact on the statutory and regulatory criteria and making a preliminary determination of the sufficiency of the Offset Proposal. The following is such an environmental assessment of the proposed project described in an application for a Coastal Zone Act (CZA) Permit, received from Croda, Inc.

The fact that DNREC considers an application to be preliminarily, administratively complete does not constitute the Department's position as to whether the application should be approved or denied. That decision will not be made until after the public hearing. The purpose of the Secretary's written assessment is to assist the applicant and the public to focus on issues presented in the application. It constitutes an administrative determination that the application is sufficient to proceed to a public hearing. In addition, should the Department eventually issue the CZA Permit, it does not automatically guarantee the applicant will receive other required permits.

The Proposed Project

Croda is seeking a permit to construct and operate a facility for the on-site manufacture of ethylene oxide from ethanol feedstock in a continuous multi-step catalyzed process. Ethanol will be delivered to the site in railcars or tank trucks, and transferred to storage tanks. The process begins with the dehydration of ethanol which produces ethylene vapor together with water vapor. The ethylene vapor is partially oxidized in a catalytic converter to form ethylene oxide. The resultant ethylene oxide is purified and sent to on-site storage for consumption by existing alkoxylation reactor systems. Environmental impacts to air quality are anticipated; the offset proposal is a combination of voluntary environmental improvement projects and emission reduction credits from the Delaware Economic Development Office.

Croda has stated there will be no change in production capacity at the site and that the project will replace the current purchase of ethylene oxide (brought in by rail car currently). DNREC has requested the ethylene oxide plant capacity (in gallons per year) as a means of determining the

size of the new ethylene oxide plant and to enable its review of any expansion or extension of the ethylene oxide plant at some point in the future, should that ever be proposed. Through the Freedom of Information Act, Croda sought confidential treatment of the ethylene oxide plant capacity information by the Secretary. The company made the case that plant capacity was Confidential Business Information as it could be used by competitors to undercut their market share of product produced at the plant. After consultation with the Department of Justice, DNREC determined the applicant had met the criteria under DNREC's Freedom of Information Act regulation to substantiate its request for confidentiality. The Secretary approved Croda's request on January 15, 2015.

Sufficiency Statement

This application for a CZA Permit, including supplemental information, has been reviewed by the Department to determine its completeness. After a thorough review of the company's application and file, the Department considers this application to be administratively complete and sufficient for proceeding to public hearing.

Environmental Assessment

The project will result in the following annual air emissions (in tons per year): NOx, 3.6; SO_2, 0.035; VOC, 3.9; TSP, 0.44; CO, 4.8; HAPs, 1.1; CO_2, 18,900. In terms of water supply, preliminary estimates are that boiler feed water for steam production will increase by approximately 30,000 gallons per day and make-up cooling water use will increase by approximately 50,000 gallons per day, on average; potable water supplied to the site is divided evenly between water purchased from United Water Delaware and on site well water. Additional solid waste from construction debris, and regular operations including packaging materials and process filters are expected but cannot be estimated at this time. Some additional flammable hazardous waste from process filters, samples and quality control laboratory operation will be generated. The quantity cannot be accurately estimated at this time, but is not expected to exceed 400 pounds per month. No other environmental impacts are anticipated.

Offset Proposal

The applicant has obtained 7 tons of offset credits (2 NOx Ozone Season and 1 NOx non-ozone season, 3 VOC Ozone Season and 1 VOC non-ozone season) from the Delaware Economic Development Office as a component of their air offset; see letter from DEDO, dated November 12, 2014, attached. In addition, the voluntary improvement projects listed in Table 1 (see attached) resulted in a total of 3.9 tons per year of emission reduction; that, combined with the of acquired emission offset credits (7 tons per year) from DEDO, will more than offset this project's air emissions. Solid wastes will be recycled to the maximum extent possible.

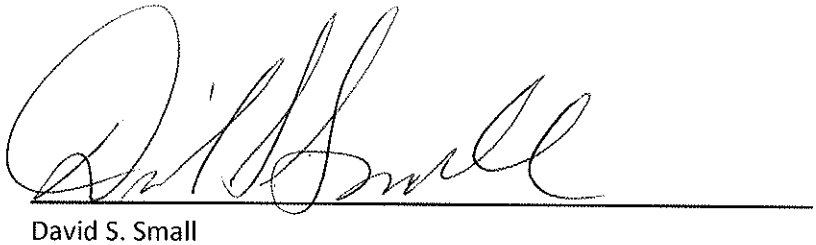
Hazardous wastes will be disposed of at permitted hazardous waste disposal facilities outside the Delaware Coastal Zone.

The CZA program has long used a 1.3:1 ratio of offsets to new emissions as a target in negotiating offset projects with applicants. In this case, Croda, using offsets from past voluntary improvements in combination with DEDO credits, achieves the 1.3:1 target. No offsets for CO_2 or CO are normally required under the CZA Program.

Conclusion

Croda, who has good record of compliance with DNREC regulations, continues to pursue the goals of the company's sustainability strategy. The proposed facility will be constructed within the footprint of an existing grandfathered non-conforming use (previously known as the Uniqema site). The project will eliminate the transportation of ethylene oxide via railcar, a public safety issue, that currently travel from Gulf Coast manufacturing facilities to the Atlas Point site. The project will create 200-250 jobs during construction of the facility and an additional 28 permanent jobs when completed.

The company's application is preliminarily administratively complete.

Approved: 

David S. Small
Secretary

Date: 1/15/15